



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

PRELIMINARY ISSUE

601.0761

Job Sheet 211106



Part No: 601.0761

Job Qty: 3 pcs

Part Name: Safety Pin



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/6/20

Job Tracking No:

Created By: Jennifer Renwick

Due Date: 7/17/20

Description:

Type: SOLD

Note: 601.0761 REV.A IPP REV:A 20.06.24 NEW ISSUE DD VERF:JFS

Ship Via:

139 Valve

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
110	Purchasing <i>memaster</i>	3		7/16/20	0.00	0.00	Purchasing - 1			<i>JE</i> JUL 8 9 2020
		pcs					Purchasing - 2			
							Purchasing - 3			
120	Packaging 2-1 - Receive - B4B	3		7/16/20	0.00	0.00	Packaging 2 - 1 - B4B			<i>JE</i> MM 6 9 2020
		pcs					Packaging 2 - 2 - B4B			
							Packaging 2 - 3 - B4B			
							Packaging 2 - 5 - B4B			
							Packaging 2 - 4 - B4B			
							Packaging 2 - 6 - B4B			
							Packaging 2 - 7 - B4B			
							Packaging 2 - 8 - B4B			
							Packaging 2 - 9 - B4B			
							Packaging 2 - 10 - B4B			
							Packaging 2 - 11 - B4B			
							Packaging 2 - 12 - B4B			
							Packaging 2 - 13 - B4B			
							Packaging 2 - 14 - B4B			
							Packaging 2 - 15 - B4B			
							Packaging 2 - 16 - B4B			
							Packaging 2 - 17 - B4B			
							Packaging 2 - 18 - B4B			
							Packaging 2 - 19 - B4B			
							Packaging 2 - 20 - B4B			
							Packaging 2 - 21 - B4B			
							Packaging 2 - 22 - B4B			
							Packaging 2 - 23 - B4B			
							Packaging 2 - 24 - B4B			
							Packaging 2 - 25 - B4B			
							Packaging 2 - 26 - B4B			
							Packaging 2 - 27 - B4B			
							Packaging 2 - 28 - B4B			



Container No: S286907



Part: 601.0761

Job No: 211106

Serial No/Batch: S286907

Revision: REV.A

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 07/09/20

Plex 7/6/20 10:57 AM Dart.Renwick.Jennifer

9/10/91

[Dart Hawkesbury] Job Sheet - Renwick, Jennifer

				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				Packaging 2 - 37 - B4B	
130 QC 6	3 pcs	7/16/20	0.00 0.00	QC 6 - 9	
				QC 6 - 68	
				QC 6 - 61	
				QC 6 - 40	
				QC 6 - 81	
				QC 6 - 82	
140 Conventional Mill - 1 - B4B	3 pcs	7/17/20	0.25 0.50	Conventional Mill - 1 - B4B	
				Conventional Mill - 2 - B4B	
150 QC 5	3 pcs	7/17/20	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
				QC 5 - 61	
				QC 5 - 81	
				QC 5 - 82	
160 Packaging 3-1 - Stock - B4B	3 pcs	7/17/20	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	

				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
				Packaging 3 - 37 - B4B	
				QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 9	
				QC 21 - SA - 77	
170	QC 21 - SA	3 pcs	7/17/20	0.00 0.00	

Part Op 110 - ISSUE P/O: _____ C OF C IS REQUIRED

Descriptions: 120 - Receive & Inspect for Damage & Mat'l Certs

130 - QC6- All purchased or subcontracted products

140 - Modify end of pin as show on dwg Deburr

150 - QC5- Inspect part completeness to step on W/O

160 - Identify as per dwg & Stock

170 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
98470A010	Shoulder-Style Ring-Grip Quick-Release Pin, 18-8 Stainless Steel, 3/16" Diameter, 1" Usable Length	3 Ea (1 ea)	110-Purchasing	S286906

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Purchasing	98470A010	3	0	0

Part Specifications

Specifications could not be found.

GA-
TBD

Plex 7/6/20 10:57 AM Dart.Renwick.Jennifer

APICAL INDUSTRIES, INC		ENGINEERING CHANGE NOTICE		02477	SHEET 1 OF 1
DWG NO 601.0761		REV: A	PREPARED BY J. CARDINER	DATE 07/08/09	EFF: ON DWG
DWG TITLE: SAFETY PIN					☐ INC. ☒ UNINC.
TRANSACTION CODES (TC): A-ADD R-REVISE C-CREATE D-DELETE	APPROVED BY: <i>P. Bravo</i>	ENGR	MFG	QC	EFF: NEXT ORDER
REASON: DELETED CROSS LINES FROM TOLERANCE BLOCK PER ECR 09-42, AND REVISED CAGE CODE					

SHEET 1, ZONE D6 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 21106

QTY REQ'D	1	601.2173	SAFETY PIN															
	FIRM No.	PART No.	DESCRIPTION	MAT'L	SPEC													
PARTS LIST																		
NEXT ASSY (S)																		
ORIGINAL DATE 07-14-04 PARTS BY: D. P. LANDERSON DRAWING APPROVAL DATE: 07-14-04 CONTRACT NO.																		
																		
SAFETY PIN																		
<table border="1"> <tr> <td>REV</td> <td>DATE</td> <td>BY</td> <td>DESCRIPTION</td> </tr> <tr> <td>8</td> <td>07/14/04</td> <td></td> <td>601.0761</td> </tr> <tr> <td colspan="4">SCALE: 1 OF 1</td> </tr> </table>							REV	DATE	BY	DESCRIPTION	8	07/14/04		601.0761	SCALE: 1 OF 1			
REV	DATE	BY	DESCRIPTION															
8	07/14/04		601.0761															
SCALE: 1 OF 1																		

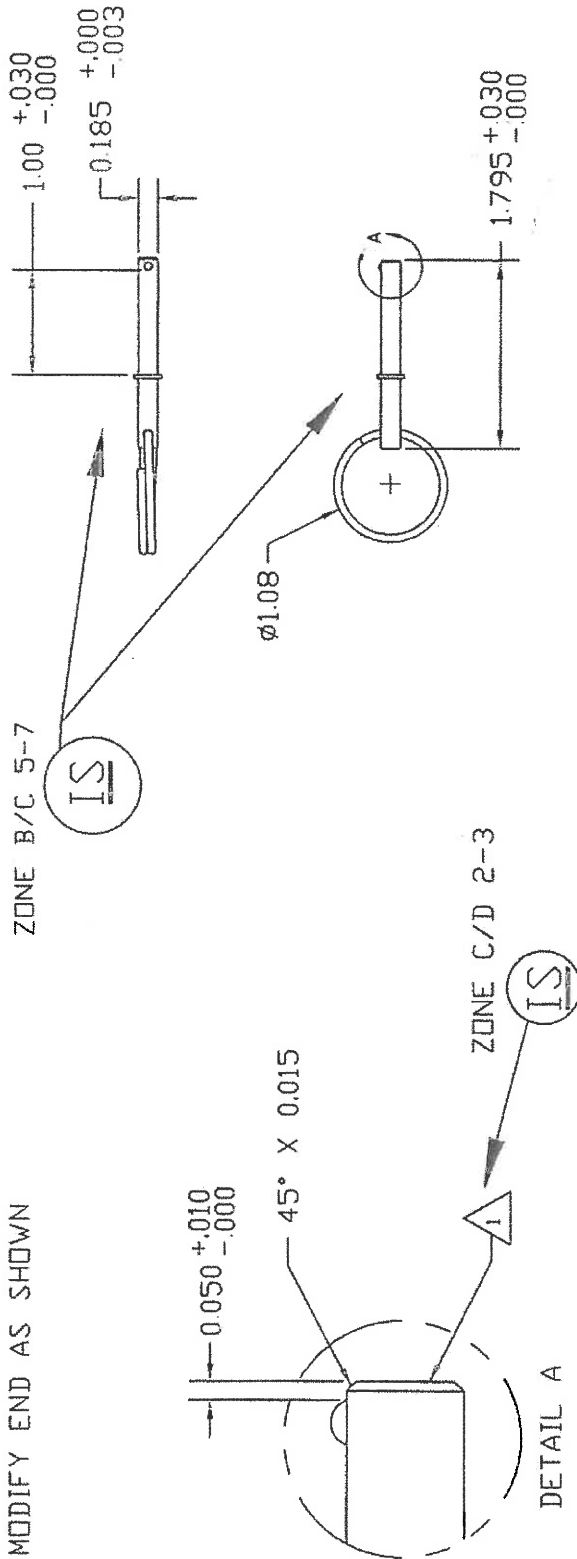
PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:						
☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM ☐ MAJOR ☒ MINOR						
DER REVIEW REQUIRED ☐ YES ☒ NO						

ENGINEERING CHANGE NOTIC		NO. 01114	SHEET 1	OF 1
DWG NO. 601.0761	REV: A	PREPARED BY B. SHAPIRO	DATE: 05/26/05	EFFECT ON DWG ☐ INC. ☒ UNINC.
DWG TITLE: SAFETY PIN				
APPROVED BY: ENGR <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
REASON: REVISED PARTS LIST AND NOTES (ECR # 05-103)				
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE				

NOTES:

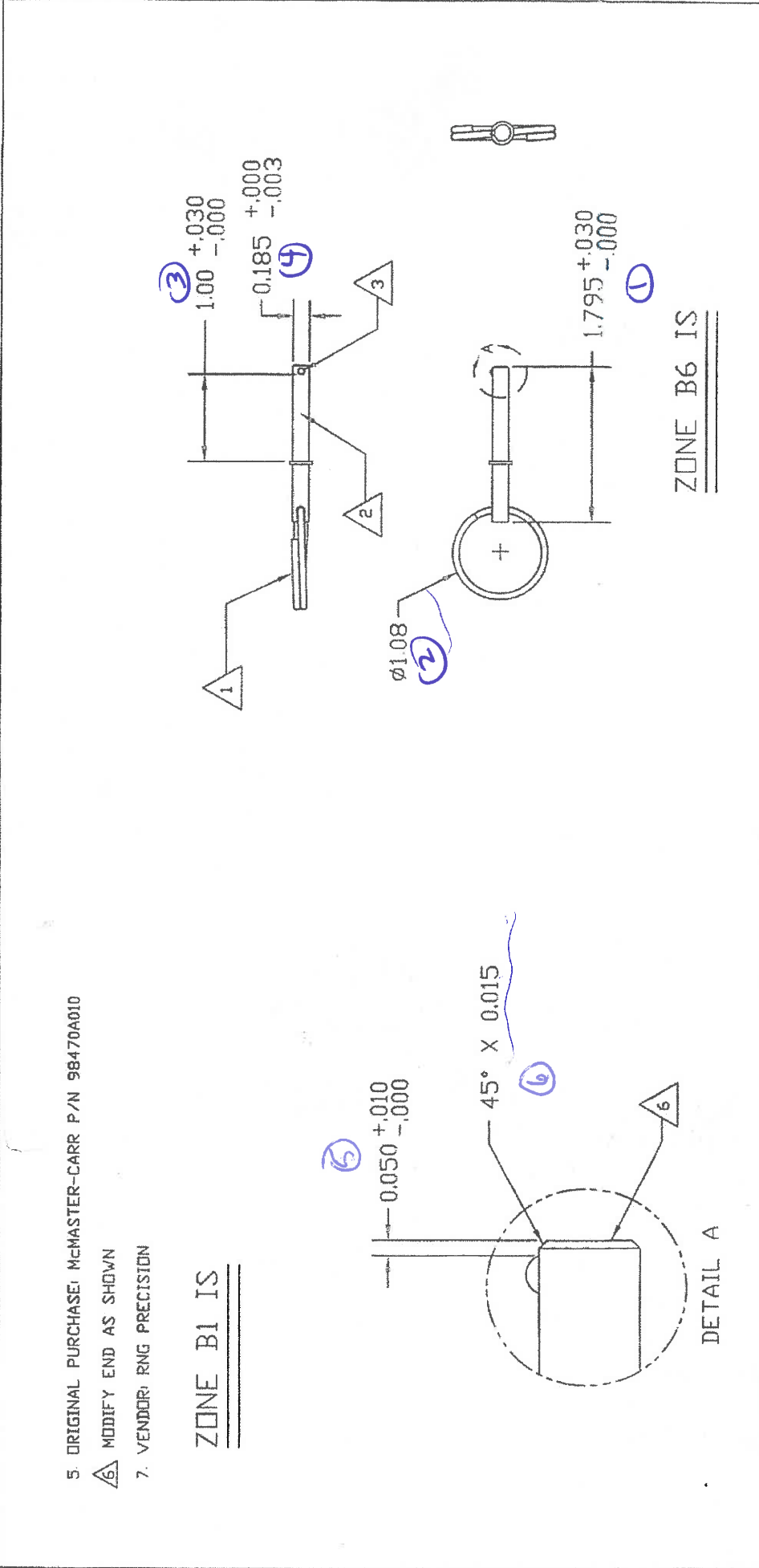
Δ MODIFY END AS SHOWN



SHEET 1 / IS

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED				
1	R	601.2173	SAFETY PIN	
F/N	TC	PART NUMBER	DESCRIPTION	QTY
DOCUMENTS EFFECTED:				
☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM ☐ MAJOR ☒ MINOR				
CHANGE CATEGORY			MATERIAL	SPECIFICATION
DER REVIEW REQUIRED			☐ YES ☒ NO	

ENGINEERING CHANGE NOTIC		ND.	00911	SHEET	OF 1
DWG NO.	601.0761	REV: A	PREPARED BY	M. HUGHES	DATE: 03/01/05
DWG TITLE:			SAFETY PIN		
APPROVED BY:	ENGR	MFG	QC	EFF:	CURRENT ORDER
REASON: IMPROVE FINISHED LOOK					



5. ORIGINAL PURCHASE: McMASTER-CARR P/N 98470A010

6. MODIFY END AS SHOWN

7. VENDOR: RNG PRECISION

ZONE B1 IS

ZONE B6 IS

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

1.820

1.8215

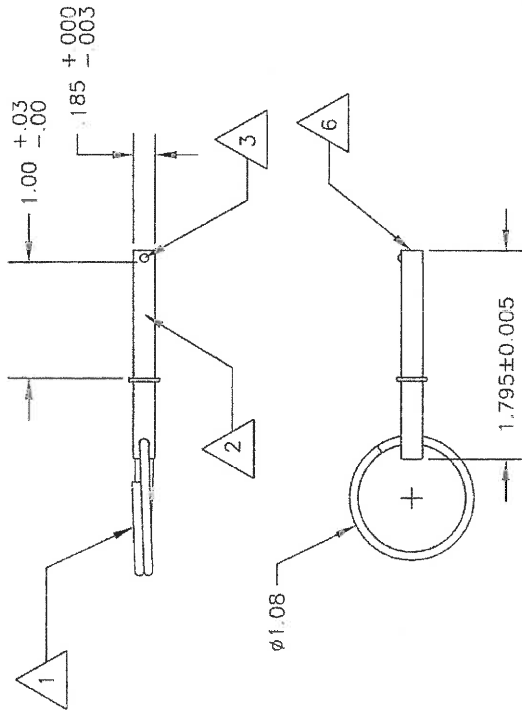
1.893

DOCUMENTS EFFECTED:	☐ MDL	☐ INSTALL	☐ INSTRUC	☐ ICA	☐ FMS	☐ BOM	CHANGE CATEGORY	☐ MAJOR	☒ MINOR	DER REVIEW REQUIRED	☐ YES	☒ NO
---------------------	------------------------------	----------------------------------	----------------------------------	------------------------------	------------------------------	------------------------------	-----------------	--------------------------------	---	---------------------	------------------------------	--

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

NOTES:

- 1 RING STAINLESS STEEL 316
- 2 PIN STAINLESS STEEL 18-8
- 3 BALL STAINLESS STEEL 316
4. FINISH: NONE
- 5 MCMASTER-CARR P/N 98470A010
- 6 MODIFY END AS SHOWN



UNINCORPORATED ECN(S)

0011, 0114, 02437

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

1	601.0761	SAFETY PIN	AAAA	
2		DESCRIPTION	MATL	SPEC
3		PARTS LIST		
4		QTY REQ'D		
5		NEXT ASSY (S)		
6		REVISIONS		
7		DATE		
8		BY		
9		CHKD		
10		APP'D		
11		DATE		
12		BY		
13		CHKD		
14		APP'D		
15		DATE		
16		BY		
17		CHKD		
18		APP'D		
19		DATE		
20		BY		
21		CHKD		
22		APP'D		
23		DATE		
24		BY		
25		CHKD		
26		APP'D		
27		DATE		
28		BY		
29		CHKD		
30		APP'D		
31		DATE		
32		BY		
33		CHKD		
34		APP'D		
35		DATE		
36		BY		
37		CHKD		
38		APP'D		
39		DATE		
40		BY		
41		CHKD		
42		APP'D		
43		DATE		
44		BY		
45		CHKD		
46		APP'D		
47		DATE		
48		BY		
49		CHKD		
50		APP'D		
51		DATE		
52		BY		
53		CHKD		
54		APP'D		
55		DATE		
56		BY		
57		CHKD		
58		APP'D		
59		DATE		
60		BY		
61		CHKD		
62		APP'D		
63		DATE		
64		BY		
65		CHKD		
66		APP'D		
67		DATE		
68		BY		
69		CHKD		
70		APP'D		
71		DATE		
72		BY		
73		CHKD		
74		APP'D		
75		DATE		
76		BY		
77		CHKD		
78		APP'D		
79		DATE		
80		BY		
81		CHKD		
82		APP'D		
83		DATE		
84		BY		
85		CHKD		
86		APP'D		
87		DATE		
88		BY		
89		CHKD		
90		APP'D		
91		DATE		
92		BY		
93		CHKD		
94		APP'D		
95		DATE		
96		BY		
97		CHKD		
98		APP'D		
99		DATE		
100		BY		

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Cross tube ☐ ☐ ☐ ☐ Small Fab ☐ ☐ Finishing ☐ ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																													
Date : _____		Sequence #: _____		QTY Affected : _____		MRB (QSI042)																															
Description Work Order Deviation				Disposition																																	
_____ _____ _____				_____ _____ _____																																	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐				FAULT CATEGORY <table border="1"> <tr> <td>Pressure/Forced</td> <td>Contamination</td> <td>Power Loss/Surge</td> <td>Positioned Wrong</td> </tr> <tr> <td>Bending</td> <td>Misaligned/off center</td> <td>Folio/Program</td> <td>Outside Tolerance</td> </tr> <tr> <td>Crushing</td> <td>BOM/Route</td> <td>Grain Direction</td> <td>Drawing</td> </tr> <tr> <td>Cracks</td> <td>Broken/Damage/Defect</td> <td>Weld</td> <td>Finish</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave/Twist</td> <td>Incomplete/Unclear Instructions</td> <td>Wrong Stock Pulled</td> <td>Part Lost/Missing</td> </tr> <tr> <td>Marks/Chatter</td> <td>Drill Holes</td> <td>Out of Sequence</td> <td>Misread</td> </tr> <tr> <td>Mislabeled</td> <td>Fit/Function</td> <td>Off-set/Set-up</td> <td></td> </tr> </table> Other/Details: _____						Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong	Bending	Misaligned/off center	Folio/Program	Outside Tolerance	Crushing	BOM/Route	Grain Direction	Drawing	Cracks	Broken/Damage/Defect	Weld	Finish	Crimp/Kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing	Marks/Chatter	Drill Holes	Out of Sequence	Misread	Mislabeled	Fit/Function	Off-set/Set-up	
Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong																																		
Bending	Misaligned/off center	Folio/Program	Outside Tolerance																																		
Crushing	BOM/Route	Grain Direction	Drawing																																		
Cracks	Broken/Damage/Defect	Weld	Finish																																		
Crimp/Kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing																																		
Marks/Chatter	Drill Holes	Out of Sequence	Misread																																		
Mislabeled	Fit/Function	Off-set/Set-up																																			
_____ _____ _____				Completed By _____ Lead hand / Supervisor _____ QC / QA Coordinator _____																																	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046698



Supplier: MCM001-VU
McMaster-Carr Supply Co,
P.O. Box 7690
Chicago, IL 60680-7690 USA
Phone: 330 995 5500
Fax: 330 995 9600

Attention: N/A,

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB046698

PO Date: 7/7/20

Due Date: 7/10/20

**Purchase Order
Revision:**

Revision Date:

Issued By: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 60

Freight Terms: Collect

Special Comments:

Items

Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M301S23GA-H50		1217T43 3/SF	301 SS SHEET, 12" x 36", 1/2 Hard Temper, 0.029" Thick	Firmed X3	-	7/10/20	3 sf	0 sf	3 sf	\$21.77/sf	\$65.31
2		2147A11		1/pk	Circular Level Vial, Plastic, 1-3/8" Base Diameter	Firmed X3	-	7/10/20	3 Ea	0 Ea	3 Ea	\$5.64/Ea	\$16.92
3		2857T128		2/pk	O-Ring Viton 3/32 Id X 9/16 Od	Firmed X6	-	7/10/20	6 Ea	0 Ea	6 Ea	\$3.375/Ea	\$20.25
4		601.3729		91545A260 5/pk	Nylon Washer	Firmed X15	-	7/10/20	15 Ea	0 Ea	15 Ea	\$0.488/Ea	\$7.32
5		601.2045		6641A41	RTV (LOCTITE 598) : RTV, Loctite 598 EXP: DATE REQUIRED AT 6 MONTH SELF LIFE	Firmed X6	-	7/10/20	6 Ea	0 Ea	6 Ea	\$16.67/Ea	\$100.02
6		6305A12		15 FT PER ROLL	Teflon Sheet receive ea	Firmed X15	-	7/10/20	15 ft	0 ft	15 ft	\$1.048/ft	\$15.72

Plex 7/7/20 3:00 PM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046698



Items

Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
7		8183K6		1/pk	Wire Guide/Grip	Firmed	-	7/10/20	3 Ea	0 Ea	3 Ea	\$9.83/Ea	\$29.49
8		9642K63		1/pk	440C SS Ball 3/4" Dia.	Firmed	-	7/10/20	5 Ea	0 Ea	5 Ea	\$4.43/Ea	\$22.15
9		MPEEKR0.625-BE		8503K232 4ft	PEEK Round Bar Beige	Firmed	-	7/10/20	4 ft	0 ft	4 ft	\$29.39/ft	\$117.56
10	211106	98470A010		1/pk	Shoulder-Style Ring-Grip Quick-Release Pin, 18-8 Stainless Steel, 3/16" Diameter, 1" Usable Length	Firmed	-	7/10/20	3 Ea	0 Ea	3 Ea	\$2.86/Ea	\$8.58

Grand Total: \$403.32

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A032 DOCUMENT SPECIAL REQUIREMENTS
A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS
A040 NOTIFICATION OF QUALITY ESCAPE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 7/7/20 3:00 PM Dart.Guerin.Kimberley



McMASTER-CARR®

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
POHB046698
Order Placed By
Kim

McMaster-Carr Number
7708530-02

Page 1 of 1
07/07/2020

Packing List

Line	Product	Ordered	Shipped
2	2147A11 Circular Level Vial, Plastic, 1-3/8" Base Diameter	3 Each	3
3	2857T128 Viton Fluoroelastomer O-Ring, Chemical- and Steam-Resistant, 3/32 Fractional Width, Dash 113, Packs of 2	3 Packs	3
4	91545A260 Lubricant-Filled Nylon Plastic Washer for 1/4" Screw Size, 0.322" ID, 0.562" OD, Packs of 5	3 Packs	3
5	6641A41 Flexible Gasket Maker Sealant, Loctite 598, 2.36 oz. Tube	6 Each	6
6	6305A12 Ultra-Low-Friction Tape Made with Teflon PTFE, Acrylic Adhesive, 1" Wide, 15 Feet Long	1 Each	1
7	8183K6 Brass Submersible Cord Grip, Metric Threads, for 0.12"-0.2" Cord OD, M8 Knockout Size	3 Each	3
8	9642K63 Tight-Tolerance Hardened 440C Stainless Steel Ball, 3/4" Diameter, Packs of 1	5 Packs	5
10	98470A010 Shoulder-Style Ring-Grip Quick-Release Pin, 18-8 Stainless Steel, 3/16" Diameter, 1" Usable Length	3 Each	3

Shipped separately from our Cleveland warehouse on 07/07

1	1217T43 Fatigue-Resistant 301 Stainless Steel Sheet, 12" x 36", 1/2 Hard Temper, 0.029" Thick	1 Each	1
9	8503K232 Wear- and Chemical-Resistant PEEK Rod Beige, 5/8" Diameter, 4 ft. Length	1 Each	1

Certificate of compliance

This is to certify that the above items were supplied in accordance with the description and as illustrated in the catalog. Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

DAS
82
9-89

Sarah Weinberg
Sarah Weinberg
Compliance Manager

Notes about your shipment

Certificate for line 8 is available at mcmaster.com/activity.

JUL 08 2020

DART AEROSPACE LTD.

*1-Box
part # CPT 007909252*

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
POHB046698

Order Placed By
Kim

McMaster-Carr Number
7708530-01

Page 2 of 2

07/07/2020

Notes about your shipment

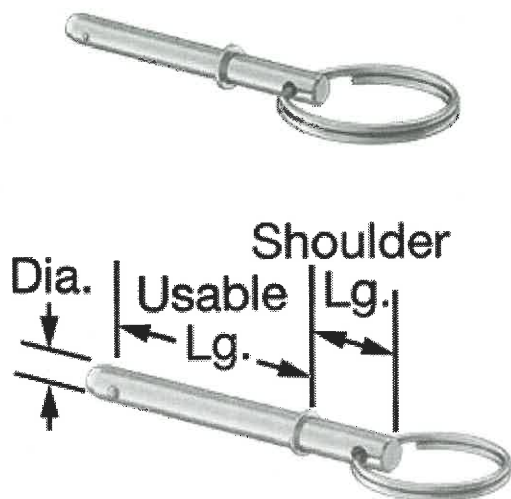
 Certificate for line 1 is available at mcmaster.com/activity.

McMASTER-CARR®

Shoulder-Style Ring-Grip Quick-Release Pin

18-8 Stainless Steel, 3/16" Diameter, 1" Usable Length

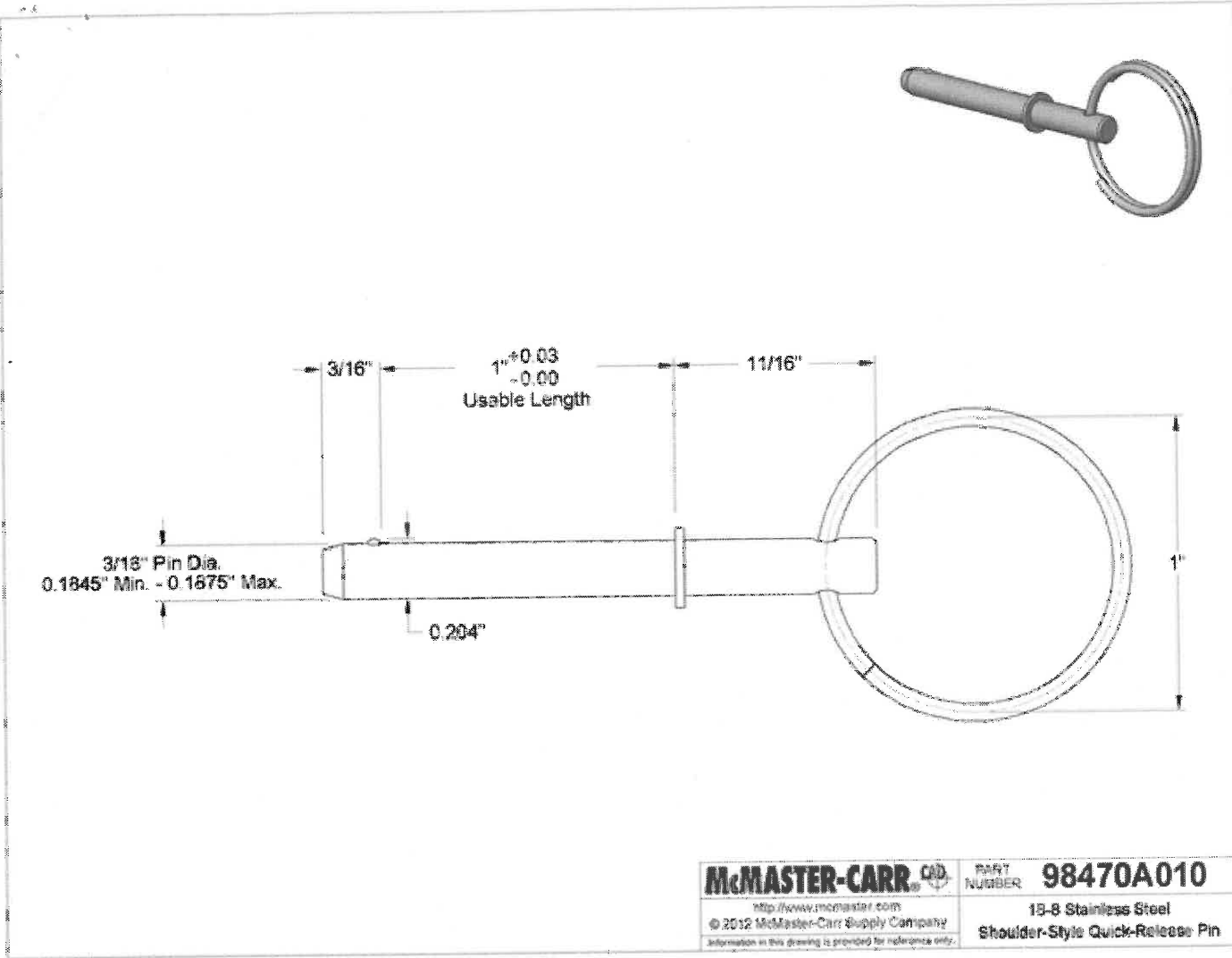
DAS
82
 9-89

 \$2.86 Each
 98470A010


Pin Type	Quick Release
End Type	Spring-Loaded Ball
Head Type	Ring
Shaft Type	Plain
End Shape	Chamfered
System of Measurement	Inch
Material	18-8 Stainless Steel
Usable Length	1"
Diameter	3/16"
Diameter Tolerance	-0.003" to 0"
Shoulder Length	11/16"
Diameter at Extended Ball Height	0.204"
Min. Hardness	Rockwell B85
Breaking Strength	2,700 lbs.
Number of Retaining Balls	1
Ball Material	316 Stainless Steel
Spring Material	316 Stainless Steel
Handle Material	316 Stainless Steel
Lock Type	Nonlocking
Passivation	Not Passivated
RoHS	RoHS 3 (2015/863/EU) Compliant
REACH	REACH (EC 1907/2006) (01/16/2020, 205 SVHC) Compliant
Country of Origin	United States

A shoulder keeps a portion of these pins outside the hole and makes the ring easy to grab. Pins have a spring-loaded ball that pops out when the pin is pushed into a hole, and retracts when the pin is pulled out. For the best fit, the hole should be as close to the diameter as possible, but not larger than the diameter at extended ball height. Breaking strength is measured as single shear, which is the force required to break the pin into two pieces.

18-8 stainless steel pins offer a balance of strength and corrosion resistance. They may be mildly magnetic.



The information in this 3-D model is provided for reference only.

